UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/518,264	12/16/2004	Arnoldus Werner Oomen	2167.065USI	6693

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EXAMINER
SU, SARAH

ART UNIT	PAPER NUMBER
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NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _14 January 2010_.

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1,3-11 and 15_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1, 3-11, 15_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

       1.☐ Certified copies of the priority documents have been received.

       2.☐ Certified copies of the priority documents have been received in Application No. _____.

       3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

FINAL ACTION

1.   Amendment D, received on 14 January 2010, has been entered into the record.

2.   Claims 1, 3-11, and 15 are presented for examination.

Response to Arguments

3.   Applicant's arguments filed 14 January 2010 have been fully considered but they are not persuasive.

As to claim 1, it is argued by the applicant that Davis does not disclose calculating a separate hash for each time frame. The examiner respectfully disagrees. Davis discloses that one of the most popular compression techniques involves breaking an image into components and transmitting the components (i.e. frames) sequentially (col. 1, lines 20-22) and that an "image frame" is defined as information digitized into binary data acquired for transmission as video, audio or text (col. 2, lines 46-48). Given that Davis does not define an "image frame" of being of a certain length and since it is well known that frame sizes can vary in terms of time (i.e. 1/24, 1/25, or 1/30 of a second), an image frame may be of any time length. Further, since the compression described in Davis involves breaking up data such as an image into sequential components and processing each component sequentially, each of these components may also be of varying lengths. Therefore, when Davis discloses that each section is hashed to create unique digests that are concatenated for each image frame, this process would also be applicable to the other sequential frames as created in the compression process (col. 6, lines 32-35), thus creating a hash for each frame.

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

5.   Claims 1, 3-6, 8, 11, and 15 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Iverson et al. (US Patent 5,852,664 and Iverson hereinafter) in view

of Hampapur et al. (US 2001/0003468 A1 and Hampapur hereinafter) and further in

view of Davis (US Patent 5,907,619).

As to claims 1, 11, and 15, Iverson discloses a system and method for decoding access

control for encoded multimedia signals, the system and method having:

receiving a bit-stream comprising a compressed multimedia signal

(col. 4, lines 45-47, 49-52);

Iverson fails to specifically disclose:

selectively reading from the bit-stream predetermined parameters in

a plurality of time frames, wherein said predetermined parameters relate to

perceptual information of the multimedia signal;

calculating a separate hash word from said parameters for each time

frame;

deriving a hash function by a concatenation of the hash words.

Nonetheless, these features are well known in the art and would have been an obvious

modification of the teachings disclosed by Iverson, as taught by Hampapur.

Hampapur discloses a system and method for detecting scene changes in a digital

video stream, the system and method having:

> **selectively reading** (i.e. extracting) **from the bit-stream predetermined**
>
> **parameters** (i.e. metadata) **in a plurality of time frames, wherein said**
>
> **predetermined parameters relate to perceptual information** (i.e. visual
>
> representation) **of the multimedia signal** (0006, lines 6-8; 0040, lines 2-7).

Given the teaching of Hampapur, a person having ordinary skill in the art at the time of

the invention would have readily recognized the desirability and advantages of

modifying the teachings of Iverson with the teachings of Hampapur by reading

information that is related to perceptual data. Hampapur recites motivation by

disclosing that automatically selecting representative data would reduce labor (0006,

lines 4-6). It is obvious that the teachings of Hampapur would have improved the

teachings of Iverson by reading information related to perceptual information in order to

reduce labor.

Iverson in view of Hampapur fails to specifically disclose:

> **calculating a separate hash word from said parameters for each time**
>
> **frame;**
>
> **deriving a hash function by a concatenation of the hash words**.

Nonetheless, these features are well known in the art and would have been an obvious

modification of the teachings disclosed by Iverson in view of Hampapur, as taught by

Davis.

Davis discloses a system and method for compressing and digitally signing compressed

video data, the system and method having:

calculating a separate hash word from said parameters for each time

frame (col. 6, lines 32-33);

deriving a hash function by a concatenation of the hash words (col.

6, lines 33-35).

Given the teaching of Davis, a person having ordinary skill in the art at the time of the

invention would have readily recognized the desirability and advantages of modifying

the teachings of Iverson in view of Hampapur with the teachings of Davis by generating

concatenated hashes. Davis recites motivation by disclosing that providing

concatenated data of a divided and hashed image allows for the receiving device to

authenticate the data before the entire image has been received (col. 2, lines 8-12). It is

obvious that the teachings of Davis would have improved the teachings of Iverson in

view of Hampapur by concatenating hashes in order to allow a receiver to authenticate

a received portion of data without receiving the entire data.

As to claim 3, Iverson discloses:

where the multimedia signal comprises at least one of an audio

signal, a video signal and an image signal (col. 9, lines 26-31).

As to claim 4, Iverson discloses:

> **where the multimedia signal has been compressed using at least one of transform encoding, subband encoding and parametric encoding** (col. 6, lines 28-35).

As to claim 5, Iverson fails to specifically disclose:

> **where the predetermined parameters relate to at least one of the energies of frequency bands; the amplitudes of frequency bands; the tonality of frequency bands; the luminance of an area of a video signal; and the chrominance of an area of a video signal.**

Nonetheless, this feature is well known in the art and would have been an obvious modification of the teachings disclosed by Iverson, as taught by Hampapur.

Hampapur discloses:

> **where the predetermined parameters relate to at least one of the energies of frequency bands; the amplitudes of frequency bands; the tonality of frequency bands; the luminance of an area of a video signal; and the chrominance of an area of a video signal** (0069, lines 3-7).

Given the teaching of Hampapur, a person having ordinary skill in the art at the time of the invention would have readily recognized the desirability and advantages of modifying the teachings of Iverson with the teachings of Hampapur by using data related to the chrominance of an area. Hampapur recites motivation by disclosing that

measuring chrominance distance can be used to determine the difference between
frames (0069, lines 1-3). It is obvious that the teachings of Hampapur would have
improved the teachings of Iverson by using data related to chrominance in order to
determine the difference between data frames.

As to claim 6, Iverson discloses:

> **analyzing the received bit-stream in order to determine the decoding**
> **scheme used to compress the multimedia signal** (col. 6, lines 38-42).

As to claim 8, Iverson discloses:

> **reading the located predetermined parameters** (col. 3, lines 27-29);
> **decoding the predetermined parameter using the decoder**
> **description** (col. 7, lines 51-53).

6.   Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Iverson in
view of Hampapur and Davis as applied to claim 6 above, and further in view of
Makiyama et al. (US Patent 6,687,409 B1 and Makiyama hereinafter).

As to claim 7, Iverson in view of Hampapur and Davis fails to specifically disclose:

> **wherein said analyzing step comprises comparing the properties of**
> **the bit-stream with a database containing properties of a number of coding**
> **schemes**.

Nonetheless, this feature is well known in the art and would have been an obvious

modification of the teachings disclosed by Iverson in view of Hampapur and Davis, as

taught by Makiyama.

Makiyama discloses a system and method for decoding using tool information for

constructing a decoding algorithm, the system and method having:

> **wherein said analyzing step comprises comparing the properties of**
>
> **the bit-stream with a database containing properties of a number of coding**
>
> **schemes** (col. 2, lines 14-22; col. 4, lines 47-50; col. 12, lines 5-7).

Given the teaching of Makiyama, a person having ordinary skill in the art at the time of

the invention would have readily recognized the desirability and advantages of

modifying the teachings of Iverson in view of Hampapur and Davis with the teachings of

Makiyama by comparing data with coding schemes in a database. Makiyama recites

motivation by disclosing that being able to select the coding scheme based on input

data allows performing a coding process in conformity with the determined coding

scheme (col. 12, lines 8-11). It is obvious that the teachings of Makiyama would have

improved the teachings of Iverson in view of Hampapur and Davis by comparing input

data with coding scheme data in a database in order to allow selection of an appropriate

coding scheme.

7.   Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Iverson in

view of Hampapur and Davis as applied to claim 1 above, and further in view of Krapp

et al. (US 2002/0169934 A1 and Krapp hereinafter).

As to claim 9, Iverson in view of Hampapur and Davis fails to specifically disclose:

where the predetermined parameters relate to a first set of frequency bands and wherein the step of deriving the hash function comprises deriving estimates of values of spectral information present in a second set of frequency bands from the predetermined parameters, the hash function subsequently being calculated from the estimated value.

Nonetheless, this feature is well known in the art and would have been an obvious modification of the teachings disclosed by Iverson in view of Hampapur and Davis, as taught by Krapp.

Krapp discloses a system and method for eliminating data redundancies, the system and method having:

where the predetermined parameters relate to a first set of frequency bands and wherein the step of deriving the hash function comprises deriving estimates of values of spectral information present in a second set of frequency bands from the predetermined parameters, the hash function subsequently being calculated from the estimated value (0064, lines 4-14).

Given the teaching of Krapp, a person having ordinary skill in the art at the time of the invention would have readily recognized the desirability and advantages of modifying the teachings of Iverson in view of Hampapur and Davis with the teachings of Krapp by calculating a hash function based on spectral information. Krapp recites motivation by disclosing that any suitable data block identifier can be calculated in order to ensure accuracy of transmitted data (0063, lines 1-5; 0064, lines 1-2). It is obvious that the

teachings of Krapp would have improved the teachings of Iverson in view of Hampapur

and Davis by calculating a hash based on spectral information in order to ensure the

accuracy of transmitted data.

8.   Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Iverson

in view of Hampapur and Davis as applied to claim 1 above, and further in view of

Levine (US Patent 6,266,644 B1).

As to claim 10, Iverson in view of Hampapur and Davis fails to specifically disclose:

> **where the multimedia signal is compressed using a parametric**
>
> **encoding scheme and where the predetermined parameters relate to at**
>
> **least one of the sinusoidal components, the noise components and the**
>
> **transient components utilized within the parametric scheme.**

Nonetheless, this feature is well known in the art and would have been an obvious

modification of the teachings disclosed by Iverson in view of Hampapur and Davis, as

taught by Levine.

Levine discloses a system and method for audio encoding, the system and method

having:

> **where the multimedia signal is compressed using a parametric**
>
> **encoding scheme and where the predetermined parameters relate to at**
>
> **least one of the sinusoidal components, the noise components and the**
>
> **transient components utilized within the parametric scheme** (col. 1, lines 11-
>
> 20; col. 2, lines 15-16, 29-31).

Given the teaching of Levine, a person having ordinary skill in the art at the time of the

invention would have readily recognized the desirability and advantages of modifying

the teachings of Iverson in view of Hampapur and Davis with the teachings of Levine by

compressing a signal according to an encoding scheme based on sinusoidal

components. Levine recites motivation by disclosing that minimizing the amount of

encoded data preserves available storage, throughput, and bandwidth for other uses

(col. 1, lines 30-32). It is obvious that the teachings of Levine would have improved the

teachings of Iverson in view of Hampapur and Davis by compressing a signal according

to an encoding scheme in order to preserve resources.

Conclusion

9.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sarah Su whose telephone number is (571) 270-3835. The examiner can normally be reached on Monday through Friday 7:30AM-5:00PM EST..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on (571) 272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/William R. Korzuch/   /Sarah Su/
Supervisory Patent Examiner, Art Unit 2431   Examiner, Art Unit 2431